1115

LONG-TERM FOLLOW-UP AFTER PHOTOREFRACTIVE KERATECTOMY.

C.ORSSAUD; F. AUCLIN; J.L. DUFIER
Consultation d'Ophtalmologie.
Formation Associée de Recherches Claude Bernard.
Hôpital Laënnec. Paris. France.

Introduction: The photorefractive keratectomy (PRK) is a safe, predictable surgical method to correct low myopia. However, the stability of this technic is still unclear, and the few results concerning its follow-up over 12 months are controversial. Purpose: To evaluate the stability of the PRK in the correction of low myopia and the visual outcome over 18 months. Patients and method: We reexamined more than 185 eyes of 120 patients. All patients were over 18 years-old. Attempted corrections ranged from -1 to -7,6 diopters. The shortest follow-up was 17 months and the longest one was 36 months. Treatments were achieved on a UV 200 LA excimer system (SUMMIT Technology), with a 5.00 mm optical zone for all procedures. Results: We separated our population in 3 subgroups according to the attempted correction: < -3 d; -3 < d < -6; > -6 d. We observe a significative evolution of the refraction between the 12th and the 18th post-operative month in the whole group ($p < 0.01$). The difference of refraction reaches also significance in all subgroups and during the same period. In the opposit, the refraction is stable after the 18th month what ever the initial correction was. However, the uncorrected visual acuity and best corrected visual acuity do not exhbit a significative change despite the decrease of the refractive effect. The haze tends to disappear even when the regression of the refractive effect did not improved after steroid therapy. Conclusion: The PRK seems to become stable only 18 months after the initial treatment. However, this regression remains moderate and does not alter the visual outcome. These results must be confirmed since our serie is only a small group of eyes.

1116

RESHAPING AFTER UNDERCORRECTION OR IN THE TREATEMENT OF HIGH MYOPIA.

C.ORSSAUD; F. AUCLIN; J.L. DUFIER
Consultation d'Ophtalmologie.
Formation Associée de Recherches Claude Bernard.
Hôpital Laënnec. Paris. France.

Introduction : A reshaping can be performed when a regression does not respond to a steroid therapy. In addition, a second photorefractive keratectomy (PRK) can be proposed in the correction of high myopia (two step procedure). Purpose : To evaluate the benefits and risks of retreatment after PRK. Patients and method : Retreatments were performed on 10 eyes (8 patients). The longest follow up was 15 months. In 4 eyes, (2 patients) a two-step procedure was planed due to a myopia over -6 diopters with a delay of 1 year between the 2 treatments. In 6 eyes, a reshaping was achieved for a persistent undercorrection at least 6 months after the first treatment. All treatments were performed on a UV 200 LA system (SUMMIT Technology), using a 5.00 mm optical zone and a mechanical epithelium debridement. After the second treatment, topical steroids were systematicaly prescribed. Results : The mean refraction was -0.1 diopters 3 months after reshapping. However, we observed an early regression that did not response under topical steroids. At the 3 month visit, the mean uncorrected visual acuity was 7.3 (+/- 2.1), and no eye lost 2 lines or more. However, the mean best corrected visual acuity was 9.6 (+/- 0.5), and improved during the follow-up. The haze was perceived as "low to moderate". We did not observed decentration of the second treatment in videokeratography or induced astigmatism. Conclusion : Reshaping is a good method to treat a residual myopia after a previous PRK. It seems to give good results and to be easy to perform, without complication due to centration or haze.

1117

Title: **LONG-TERM REGRESSION AFTER PRK.**

Author(s): E. Leite, C. Tavares, L.Ribeiro, H. Azevedo, E. Cardoso.

Setting: Department of Visual Sciences, Biomedical Institute for Light and Image Research, University of Coimbra, Coimbra, Portugal.

Purpose: The main objective was to assess the natural regression after 24 to 36 months after PRK and with at least 18 months with no therapy. One hundred patients were evaluated and divided in two groups; group A (less than 6 dpts) with sixty-two patients and group B (6 to 12 dpts) with forty-eight patients.

Methods: Change of final refractive correction at 24 and 36 months.

Results: The study included only patients on which the attemped correction was achieved (residual refractive error less than 0.75 dpt.). Group A showed a regression index of 14% (more than 1 dpt./12 months), and group B presented a regression index of 18% in the first year after stopping steroid therapy. In the second year the regression indexes were in group A, 2% and in group B, 4%. No hyperopic change was found after stopping steroid therapy.

Conclusions: These results showed that eventual stability are only achieved two to three years after surgery. This study and previous date (1994) presented by the author suggesting a seasonal variation point to the need for developing normograms for PRK.

1118

Hanne Olsen, Jesper Hjortdal & Niels Ehlers.

Århus University Hospitol.
Denmark.

Excimer laser treatment for compound myopia and astigmatism.

Un-biased evaluation of advanced corneal refractive techniques including combined myopic-astigmatic excimer laser ablation demands quantification of charges in corneal toptgraphy.
A newly developed method enabling separation of corneal topographic data into spherical equivalent, regular astigmatic and irregular astigmatic components was used for evaluating the results of combined myopic-astigmatic excimer laser ablation in 15 younger subjects. All patients were at least 6 months post-op.
The attempted refractive change was compared with the obtained subjective refractive change, and with the objective changes in corneal tophpgraphy.
Comparisons of automatet keratometry, auto-refraction and corneal topography for prediciton of subjective outcome were performed.